REMARKS

Claims 1-20 are pending and under examination. Applicants have cancelled claims 1-15, 19 and 20, and have amended claims 16-18 to place the claims in independent form and introduce certain clarifying language. No new matter has been added. Accordingly, upon entry of this Amendment, claims 16-18 will be pending and under examination.

35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 13 and 16 under 35 U.S.C. §112, second paragraph, as allegedly unclear. In response, applicants note that claim 13 has been cancelled, and that claim 16 has been amended to address the Examiner's concerns regarding the phrase "the mass." Applicants maintain that these changes overcome the rejection.

35 U.S.C. §103

The Examiner rejected claims 1, 2, 4-12 and 16 under 35 U.S.C. §103 as allegedly obvious over Fuchs, et al., in view of Nair, et al. and Oita, et al. The Examiner also rejected claims 3, 19 and 20 under 35 U.S.C. §103 as allegedly obvious over Fuchs, et al., in view of Nair, et al., Oita, et al. and Shanbrom. The Examiner further rejected claims 13-15, 17 and 18 under 35 U.S.C. §103 as allegedly obvious over Fuchs, et al., in view of Nair, et al. and Oita, et al., further in view of the combination of Cirigliano et al. (US 6,120,823) and Seiki (that is, Saeki) et al. (JP 2002-017319, English abstract only).

In response to the rejections of claims 1-15, 19 and 20, applicants note that these claims have been cancelled. In response to the rejections of claims 16-18, applicants respectfully traverse.

In amended claim 16, the final concentration of dried substance of a puree or a fruit juice obtained from an acerola fruit with respect to the total mass of the food or drink is specifically defined as "within a range of between 0.05 and 10% by mass of the food or drink." In amended claims 17 and 18, the amount of the puree or fruit juice obtained from an acerola fruit with respect

to the total mass of food or drink is specifically defined as "1 to 10 parts by weight with respect to 100 parts by weight of the food or drink" and "2 to 10 parts by weight with respect to 100 parts by weight of the food or drink", respectively.

The Examiner asserts that the anti-bacterial effect of polyphenols is obvious in view of the cited references. Even if this were true, which applicants do not concede, the anti-bacterial effect of the instant acerola puree or juice, and its dried substance, is extremely surprising. Paragraph [0037] of the present specification discloses a total polyphenol content of 0.71% regarding the solid contents of acerola fruit juice. In addition, the present specification states that "[w]hen the final concentration of the solid contents of the acerola fruit juice was 0.2% (2 mg/ml) or more, bacterial growth could be completely blocked. It was found that when the final concentration was 0.1%, bacterial growth was inhibited." (p. 12, l. 29-32). In light of this total polyphenol content, the total polyphenol concentration in acerola fruit juice having a 0.1% final concentration of solid contents is estimated to be about 7 μg/ml (0.1% (1mg/ml) x 0.71% = 7.1μg/ml). Contrary to the Examiner's assertion, and to the teaching of Oita, the anti-bacterial action at a 7.1 μg/ml polyphenol concentration is extremely strong. More specifically, Oita discloses MIC (μg/ml) values of grape polyphenols on the growth of *A. acidoterrestris* of from 50 to <1000 (Table 1). That renders the instant invention unexpected.

The Examiner newly cites references Cirigliano et al. Saeki et al. The Examiner states that Cirigliano et al. discloses certain phenolic acids, at 0.002 to 0.2% by weight of the food product, having antimicrobial benefits, and Saeki et al. also discloses certain antimicrobials added to a beverage in an amount ranging from 0.01 to 10 parts by weight. The Examiner concludes that such a range overlaps with the concentration ranges in claims 13-15, 17 and 18 (of which claims 17 and 18 are still pending). However, the relation between the specifically disclosed compounds in Cirigliano et al. and Saeki et al. and the ingredients of the acerola fruit is unclear. Therefore, the

combination of Cirigliano et al. and/or Saeki et al. with other cited references cannot properly be construed as creating a likelihood of success.

Moreover, Oita et al. teaches that "the growth of *Alicyclobacillus acidoterrestris* was inhibited by grape polyphenols of resveratrol (50 μg/ml), ferulic acid (150 μg/ml), p-coumalic acid (200 μg/ml), p-hydroxybenzoic acid, or Kyoho seed proanthocyanidine (900 μg/ml)." (English abstract). Oita et al. also teaches that "the MICs of these polyphenols are fairly higher than the concentration of the individual polyphenol (equal to or less than 3 μg/ml) in a fruit juice." (page 555, Discussion). That is, it is strongly suggested that at the concentration of any polyphenol in a grape juice, the growth of *A. acidoterrestris* is not inhibited. In fact, Oita et al concludes that "explaining the reasons why *A. acidoterrestris* cannot grow in a red grape juice by synergistic antibacterial effect of the various polyphenols is difficult at this stage." (page 555, Discussion). Such teaching strongly suggests to a person of ordinary skill that the antimicrobial effect against *A. acidoterrestris* in a red grape juice is based on an ingredient *other* than polyphenols therein. Therefore, even though acerola fruit includes polyphenols, the Examiner's point that the antibacterial effect of acerola fruit would have been obvious in view of the cited references combined is without merit. In fact, an antibacterial effect only occurred by addition of acerola fruit into other fruit juice which may also include polyphenols (See, e.g., Example 4 and 5 of the present specification). In addition, if the antibacterial effect of the present invention were based on an antibacterial activity of polyphenols as the Examiner states, a person skilled in the art would have to concentrate ingredients in the acerola fruit juice to concentrate polyphenols therein in view of Oita et al. However, in the present invention, the acerola fruit juice is diluted and used in the claimed method. Therefore, the present invention is not achieved on the basis of Oita et al. and other cited references combined therewith.

In view of the above, the subject matter of claims 16-18 is unobvious over the combination of the cited references, and should be allowed.

Any fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
COHEN PONTANI LIEBERMAN & PAVANE LLP

By /Alan J. Morrison /
Alan J. Morrison
Reg. No. 37,399
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

December 15, 2010